

XIX. *New species of Heterocera from the Khasia Hills.*
Part I. By Colonel CHARLES SWINHOE, F.L.S.,
F.Z.S., &c.

[Read July 1st, 1891.]

PLATE XIX.

BOMBYCES.

SYNTOMIDÆ.

HYDRUSA, *Walker*, ii., p. 255 (1854).

1. *Hydrusa era*, n. sp. (Pl. XIX., fig. 15).

♂. Palpi and antennæ black, tips of antennæ white above; frons, head, and body bright ochreous; space between the antennæ, a thin line behind, three longitudinal stripes on thorax, segmental bands on abdomen, and tips of abdomen, deep black. Wings hyaline, veins broadly ochreous, a blackish lunular mark in the ochreous band on disco-cellular vein of fore wings, and some black atoms on the outer ochreous veinlets of both wings; the whole space below submedian vein on fore wings and above subcostal vein on hind wings ochreous; costal and inner margins, and marginal band on both wings deep black, the inner border of the latter irregular and deepest at the apices. Under side: wings and body coloured and banded as above, slightly paler, and bands thinner on abdomen; legs black, striped with ochreous grey. Expanse of wings $1\frac{8}{10}$ in.

One specimen.

Somewhat resembles *Syntomis grotei*, Moore, in coloration and markings, and has the same peculiar ochreous tinge and black anal tip.

2. *Hydrusa baiæa*, n. sp. (Pl. XIX., fig. 10).

♂ ♀. Palpi and antennæ black, antennæ white above towards the tips; frons, head, and body bright ochreous; space between the antennæ, a thin band behind, three longitudinal stripes on thorax, which meet in a band before and behind, segmental bands on abdomen, and extreme tip, deep black. Wings mostly hyaline, with black veins and borders. Fore wings with the costal line

black, the band on disco-cellular broadly black, the black colour on the lower discoidal veinlet and on the first and second median veinlets thickening towards the irregular marginal band, some ochreous colour on the veins towards the base and on the space below the submedian vein. Hind wings with the costa broadly black, and with a marginal band somewhat as on fore wings. Under side as above; legs black, streaked with ochreous grey; tarsi for the greater part whitish. Expanse of wings, $1\frac{6}{10}$ in.

Two specimens.

Allied to *H. diaphana*, Kollar; is smaller, bands on wings narrower, the black space in the first median interspace is absent, and the body is brighter coloured, with ochreous thorax instead of a black one. I found this insect also in coll. Moore without name.

3. *Hydrusa actea*, n. sp. (Pl. XIX., fig. 7).

♂ ♀. Palpi and antennæ black; antennæ in the male with short regular pectinations, serrated in the female, with white tips above in both sexes; frons, head, and body bright ochreous; space between the antennæ, a band on each side of the thorax, which meets in front, segmental bands on abdomen, and anal end, deep black; in the male the latter is broadly black, in the female only at the extreme tip. Wings mostly hyaline, veins and borders black. Fore wings with a broad band on disco-cellular, the black colour nearly filling the interspace in connection with the outer marginal black band, leaving only a small hyaline spot in the interspace just outside the disco-cellular band; otherwise both wings are marked very much as in the preceding species, except that the marginal band is broader, especially at the apex. Under side as above; legs black, marked with ochreous, and with the greater portion of tarsi whitish. Expanse of wings, ♂ $1\frac{3}{10}$, ♀ $1\frac{8}{10}$ in.

One pair.

Though superficially like the preceding, the pectinated antennæ in the male at once distinguishes it.

ZYGÆNIDÆ.

CLELIA, Walker, ii., 465 (1854).

4. *Clelia discriminis*, n. sp.

♂ ♀. Deep black; antennæ, head, and thorax covered with metallic-blue scales; some blue scales down the centre of the abdomen of the female, but these are not visible in the male, and in respect

to these scales the species seems variable, another female having none visible. Fore wing with broad metallic-blue streaks, two at the base longitudinal, the others submarginal and central, stopping before a transverse band at one-third from base, this band slightly inclining outwards from the hinder margin; two curved subapical streaks, nearly completing a circle, a broad streak near hinder angle, and a marginal thin band, which is more complete in the male than in the female. Hind wings unmarked, except for some metallic-blue scales inside the abdominal margin in the male. Under side dull black, paler than above; hind wings with two longitudinal streaks of blue scales; fore wings with a few scales on the veins in one female only; legs and body also with blue scales in parts. Expanse of wings, $\frac{9}{10}$ to 1 in.

Two males, three females.

Differs from both *C. sapphireana*, Walker, and *C. nigro-viridis*, Elwes, in the blue markings of the wings, and from the latter in the colour of the metallic scales.

CHALCOSIDÆ.

EPYRGIS, *Herr.-Schäff.*, Lep. Exot. Schm., i., pl. 2,
f. 7 (1853).

5. *Epyrgis cuprea*, n. sp.

♀. Antennæ, head, and body greenish black; collar with four white spots, thorax with two on each side and one behind, abdomen with a dorsal row. Fore wings of a uniform cupreous brown, with a submarginal row of white spots, and a small basal white spot. Hind wings cupreous brown, darker than fore wings, with white streaks in the interspaces, the two nearest abdominal margin being all white; cilia of both wings white, with the exception of the upper centre of fore wings, where it is coloured like the wing. Under side: wings as above; thorax greenish black, spotted with white; abdomen white, banded with greenish black; legs brown, streaked with white; tarsi brown. Expanse of wings, $3\frac{2}{10}$ in.

Two specimens.

Differs from all the other Indian species of this genus in the uniform brown coloration of the fore wings.

MILLERIA, *Herr.-Schäff.*, Lep. Exot., i., f. 4 (1853).

6. *Milleria hamiltoni*, n. sp.

♀. Antennæ and head bright blue-green, a thin crimson collar behind the head; frons pale metallic-blue; thorax greenish brown, with some blue marks in front; abdomen with the segments

variegated, the first two pale blue, the next two brown and blue, the remainder more or less blue. Fore wings with the veins thickly marked with greenish brown, running into the interspaces, leaving a few pale sulphur-yellow basal streaks, and a number of elongated spots of the same ground colour, decreasing in size from the centre. Hind wings pale sulphur-yellow; costa, and outer border to the submedian vein blue-green, bright blue in some lights, attenuated hindwards, and running in on the veins; abdominal border limited by the subcostal vein, bright orange-yellow. Under side: wings as above, with all the markings pale bright blue; pectus pale yellow, thorax blue, abdomen with pale yellow broad bands, legs black with blue scales, femora with pale yellow stripes. Expanse of wings, 3 in.

One specimen.

A very handsome insect, allied to *M. virginalis*, Herr.-Schäff., the type of the genus, but widely separated by its dark fore wings, and metallic-blue border to hind wings. There is an example from Assam in the Oxford Museum.

GYNAUTOCERA, Guér., Mag. Zool., 1830, p. 12.

7. *Gynautocera zara*, n. sp.

♂. Antennæ, head, body, and wings black; shaft of the antennæ with metallic-green scales on the basal half above; head with a few crimson irrorations, a thin crimson line behind it; thorax with a duplex crimson spot in front, and a larger one behind; abdomen with crimson tip. Fore wings with pale marks in the interspaces on the outer half, as in *G. papilionaria*, but more conspicuous. Hind wings with the apical portion and all the costal space above the subcostal vein very pale, in parts almost whitish; a pale bluish white discal space where *G. papilionaria* has the discal patch, not white with blue borders, as in that species, but of a uniform dirty bluish white, with dentations running along the veins almost to the outer margins. Under side with the fore wings without any cyaneous reflections; hind wings with the apical space broadly pale; a crimson patch at base of fore wings; thorax and abdomen crimson, with black bands; legs black. Expanse of wings, $3\frac{1}{2}$ in.

One specimen.

Allied to *G. papilionaria*, Guér., but differs considerably from it in the head being black instead of crimson, in the two crimson spots on thorax above, in the absence of cyaneous reflections below, in the pale apical

and costal portions of hind wings, and in the different character and colour of the discal patch.

NYCTEMERIDÆ.

DEILEMERA, *Hübner*, *Verz. Schm.*, p. 178 (1816).

8. *Deilemera carissima*, n. sp. (Pl. XIX., fig. 1).

♂. Palpi black, yellow at the base of last joint; antennæ greyish brown; head and body yellow; head, collar, and thorax spotted with black; abdomen with a double row of black spots on each side. Wings white; fore wings with greyish brown, nearly mouse-coloured bands, one before the middle, broad, disjointed in the centre, where it is somewhat macular, widening above and below, expanding on the costa, and running in on the costa to the base, also widens outwards, nearly touching the apical band, also expands broadly along the hinder margin, which it does not touch, except at the hinder angle, and runs in also to the base; a large spot close to the outer margin of the band at its centre; a broad apical band enclosing a subapical white square spot, this band narrowing hindwards, and becoming macular. Hind wings with a macular marginal band of same colour, and with an excavated outer margin to the wing before the anal angle. Under side: wings as above, body and legs yellow, fore and middle legs brown above. Expanse of wings, $2\frac{2}{10}$ in.

One specimen.

Nearest to *Deilemera mülleri*, Voll.; pattern of wings somewhat similar to *D. arctata*, Walker, but the excavated outer margin of hind wing at once distinguishes it.

LITHOSIIDÆ.

BARSINE, *Walker*, ii., 546 (1854).

9. *Barsine delicia*, n. sp. (Pl. XIX., fig. 12).

♂. Antennæ, head, thorax, and fore wings yellow; thorax and fore wings streaked with vermilion. Fore wings crossed by two brown lines or thin bands, and with the cilia brown; first band from hinder margin, one-third from base, inclining outwardly, bifurcated from above its middle, one branch inclining inwards to the costa near the base, the other to the costa at the centre, where it meets the second line, which is discal, starting from the hinder margin, beyond the middle inclining towards the apex, but not reaching it, being angled outside the cell inwards to the costa, where it meets the other line. Hind wings and abdomen vermilion, unmarked, but not so dark nor so bright as the streaks on the fore

wings. Under side: body, legs, and wings of a uniform vermilion, a brown mark on fore wings where the bands meet; bands and streaks indistinctly visible through the wings; cilia of fore wings brown. Expanse of wings, 1 in.

One specimen.

LIPARIDÆ.

REDOA, Walker, iv., 826 (1855).

10. *Redoa nigricilia*, n. sp.

♂ ♀. Pure white, shafts of the antennæ greyish. Wings silvery white, shining; costal line of fore wings grey; tips of cilia pale black; the females with a black dot at end of cell in fore wings, the male without it; otherwise above and below without any markings. Expanse of wings, ♂ $1\frac{8}{10}$, ♀ 2 in.

One male, two females.

Near *R. cymbicornis*, Butler, which, however, has a pure white cilia.

11. *Redoa dica*, n. sp.

♀. White; uniform in coloration throughout, body unmarked, wings with a shining glossy sheen, as in *Redoa clara*, Walker. Fore wings with the cilia arched, apex acute, outer margin nearly straight, slightly oblique, hinder margin long and convex, costal line blackish brown, an indistinct grey thin band or thick line slightly curving inwards from middle of hinder margin to costa near the apex, and in certain lights some silvery transverse thin bands are visible, running from the hinder margin towards the apex; cilia tipped with brown. Hind wings unmarked; cilia tipped with a little brown in the middle. Under side white, unmarked; fore legs black on their inner sides; all the legs with black claws. Expanse of wings, $2\frac{4}{10}$ in.

One specimen.

I am tempted to describe this insect, though it is a female, on account of its beauty, and in the hopes of getting males in the collector's further consignments; it is allied to *Redoa zinaria*, Moore, from Java.

ORGYIA, Ochs., Schm. von Eur. (1810).

12. *Orgyia interjecta*, n. sp. (Pl. XIX, fig. 2).

♂. Palpi, head, and pectus reddish ochreous; antennæ with the shaft brown, plumes black; body and wings blackish brown. Fore wings with a very broad, transverse, uniform white, straight

band from the middle of the costa to the hinder margin, its outer side overlapping the angle, the band slightly diffuse on both sides, and with the veins on the inner portion of the wing pale. Hind wings with a very large black patch on the apical portion, and the costal space above is whitish; cilia white at the apex. Under side: wings as above, but paler; thorax and abdomen whitish, tip of abdomen ochreous; legs with whitish stripes. Expanse of wings, $1\frac{8}{10}$ in.

One specimen.

Allied to *O. albifascia*, Moore, but differs much in the hind wing, which in that species is of a dark uniform blackish brown.

SOMENA, *Walker*, vii., p. 1734 (1856).

13. *Somena magna*, n. sp.

♀. Palpi, antennæ, head, and fore part of thorax pale yellowish grey, as is also the apical tuft; thorax and fore wings dark grey, irrorated with blackish brown atoms; abdomen dark brown. Fore wings with a broad yellow marginal border, with an undulating inner margin containing a large black spot in the upper discoidal interspace; a faint yellowish submarginal line in the grey portion of the wing. Hind wings grey, paler than the fore wings, faintly irrorated with grey atoms; a broad marginal whitish border, diffuse inwardly. Under side: fore wings grey, with pale yellow outer marginal border; hind wings whitish; body dark brown; legs yellowish grey. Expanse of wings, $2\frac{9}{10}$ in.

One specimen.

A very large *Somena*, allied to nothing I know of; the male (as is usual in this genus) will probably be somewhat smaller, but of the same pattern and colour.

NOTODONTIDÆ.

PYDNA, *Walker*, vii., p. 1753 (1856).

14. *Pydna notata*, n. sp. (Pl. XIX., fig. 16).

♂. Antennæ, palpi, head, thorax, and fore wings yellowish fawn-colour; thorax slightly paler behind. Fore wings clouded with reddish grey atoms, especially along the costa; two brown spots in a line in the centre of the wing near the base, a brown diffuse spot at the end of the cell, a small brown patch on the hinder margin before the middle, from whence a row of brown spots extends across the wing towards the apex; outer margin with

a row of dark brown dots between the veins. Hind wings whitish, with minute brown dots on the margin between the veins; otherwise unmarked; abdomen darker than the hind wings, but paler than the thorax. Under side of a uniform greyish colour, unmarked; legs fawn-colour. Expanse of wings, $1\frac{9}{10}$ in.

One specimen.

Its white hind wings at once distinguishes it from its nearest ally, *P. testacea*, Walker; the wings are narrower, and, though the fore wings are of the same tone of colour, the markings are differently disposed.

NOCTUES.

APAMIIDÆ.

GORTYNA, *Ochs.*, Syst. Gloss. Schm. Eur., iv. (1816).

15. *Gortyna intermixta*, n. sp. (Pl. XIX., fig. 11.)

♂. Ferruginous; palpi brownish. Fore wings with a bronzy gloss; orbicular and reniform pale, large, ringed with brown, the former round, the latter like a compressed figure of 8; a brownish patch at the base, which runs down the hinder marginal third into a sort of knob; a brown patch or spot at base of cell on the inner side of the orbicular, but clear of it; two indistinct brownish transverse lines, first before the middle from the angle of the knob, nearly upright to the costa, second just beyond the middle, outwardly deeply curved, and touching the reniform; a dark brown discal line, curving deeply outwardly, and all the wing from this line to the margin dark brown, with the exception of a pale patch at the apex; a pale, sinuous, indistinct, transverse line running through the centre of the dark marginal space; marginal line brown; cilia brown, with a pale line at its base. Hind wings and abdomen greyish brown, paler than thorax and fore wings; an indistinct discal grey band on fore wings; cilia with pale basal line. Under side of a uniform pale greyish brown, shining, the discal line on both wings faintly visible; legs dark brown. Expanse of wings, $1\frac{7}{10}$ in.

One specimen.

Has a superficial resemblance to *Pyrrhia marginata* of Klein, an European moth of the family *Heliothidæ*.

BENDIDÆ.

KALMINA, gen. nov.

♂. Antennæ, palpi, and general character as in *Hamodes*; but differs as follows:—Fore wing with the median vein distorted and

bent upwards towards the subcostal, with a large tuft of long hairs on the under side, in a glandular patch just below it in the curve; the first median branch is displaced outwards, and given off with the other two median branches from the lower angle of the cell. Hind wing with the costa expanded into a large lobe, making the apex appear as if cut across, the costal vein anastomosing with the subcostal to half the length of the cell, then curved up to near the end of the lobe on the costa.

16. *Kalmina ochracea*, n. sp. (Pl. XIX., fig. 3).

♂. Dark bright ochraceous; palpi with brown sides, pale yellow beneath; body and wings sparsely irrorated with black atoms; abdomen with a black transverse thin band before the apex. Fore wings with a large blackish brown spot at end of cell, a minute dot inside of it, another subbasal; two indistinct, incomplete, nebulous, thin, transverse bands, first before the middle, second beyond the middle, the latter outwardly angled above with another similarly angled band outside it, and running into its centre from above. Hind wings with more than the abdominal half semihyaline, and consequently paler and unmarked; some indications on the rest of the wing of two median bands, a straight pale line across both wings (omitting the semihyaline portion of hind wings), from apex of fore wings to the abdominal margin of hind wings, one-third from anal angle, this line is bordered outwardly by a dark brown line, and followed by a broad brownish ochreous band, which fills up the whole marginal space in the fore wings, but is merely a broad band with an irregular outer margin on the hind wings. Under side of a similar colour, the hind wing finely clothed, but with more than two-thirds of the lower portion of the hind wing without scales, up to and on the outer side beyond the very large sexual tuft of hairs below the median vein in the centre of the wing; outer band brown, a brown suffusion near apex of fore wings, and a medial band of small spots on hind wing. Expanse of wings, $2\frac{3}{10}$ in.

One specimen.

Has a superficial likeness to *Hamodes attaccicola*, Walk.

HYPENIDÆ.

DICHROMIA, Guén., Delt. et Pyral., 18 (1854).

17. *Dichromia mollis*, n. sp.

♂ ♀. Antennæ, head, thorax, and fore wings purplish grey; palpi purplish black, irrorated with minute white scales, and with

pale yellow tips; head, thorax, and fore wings irrorated with purplish black atoms. Fore wings with an upright sinuous whitish line beyond the middle; on its inner side is a large blackish brown patch, which is limited inwards by a pale somewhat reddish space, which occupies the basal and hinder marginal portions, the inner margin of the black patch running in a curve from the costa, one-sixth from base, to the white line about one-sixth from the hinder margin; on the outer portion of the wing is a black subapical patch on the costa, and another large blackish patch, diffused downwards, and limited above by a short sinuous line running inwards from the apex; a black marginal line, with pale lunules. Hind wings ochreous, with black marginal border, deep at apex, and fining downwards to the anal angle; in some specimens it reaches it, in others it does not; marginal line and cilia black, sometimes this colour stops short of the angle. Under side: fore wings of a nearly uniform purple-brown, a subapical interior white spot, and another on costa, one-fifth from apex; hind wings as above; body and hind legs ochreous; fore and middle legs brown. Expanse of wings, $1\frac{2}{3}$ in.

Seventeen males, one female.

The male, when freshly caught, has an anal brush of long hairs turning upwards; it is also common in Sikkin, from whence I have several specimens. It was wrongly identified in the B. M. collection as *D. trigonalis*, Guén., which I also have from Solon and Mandi; it is nearest to *D. triplicalis*, Walker, which also comes from the Khasias. It differs materially, however, in the nature of the central black patch on fore wings, which in *triplicalis* is a broad black band reaching the hinder margin, and is limited on both sides by a white line from costa to hinder margin.

HYPENA, *Schr.*, Faun. Boic., p. 163 (1802).

18. *Hypena daria*, n. sp. (Pl. XIX., fig. 14).

♂. Pinkish grey, covered with brown irrorations. Fore wings with a post-medial transverse waved line, marked with black, inclining from centre of hind margin to costa, less than one-third from apex, a similar marginal line; space between these lines darker than the rest of the wing; a black apical curved streak, with a pale space above it at the apex. Hind wing brown, darkest towards the margins; marginal line dark brown; cilia on both wings pinkish grey, strongly marked with brown. Under side

paler; hind wings with a brown discoidal spot; both wings with a central transverse thin brown band, outwardly curved on the hind wings; marginal line dark brown. Expanse of wings, $1\frac{1}{2}$ in.

One specimen.

Allied to nothing I know of.

19. *Hypena laxia*, n. sp.

♂. Pinkish brown, covered with brown irrorations. Fore wings with a duplex pale line from near centre of hinder margin to costa, one-fifth from apex; this line is curved very slightly outwards; a blackish sinuous line at apex, above which is a whitish space; from this downwards is a submarginal row of small blackish marks, and a whitish suffusion between this and the margin; marginal lunules black. Hind wings blackish brown, marginal line black. Under side paler; fore wings brown, except on the margins, which are pinkish grey; hind wings whitish, with the outer and upper portions pinkish grey, irrorated with brown; a brown discoidal spot and indications of an outwardly curved central transverse brown line; an indication of a similar line on the fore wings, one-fifth from the apex on the costa. Expanse of wings, $1\frac{3}{10}$ in.

Two specimens.

Allied to the preceding, but with a double transverse line on fore wings instead of a single one, and quite differently disposed.

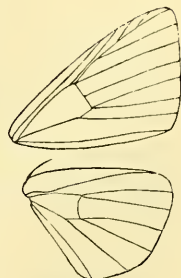
GEOMETRITES.

URAPTERYGIDÆ.

MICRONISSA, gen. nov.

Type. *M. margaritata*, Moore.

♂. Antennæ bipectinated to three-fourths its length; palpi short, slender, and up-turned. Fore wing with the apex rather pointed, the outer margin nearly straight, the first subcostal arising before the angle of cell, the second and third given off before the apex, the fifth nearer the angle of cell, upper radial from the angle, the lower from the middle of disco-cellulars, second and third medians from lower angle, first median from before the angle. Hind wing slightly angled at second median branch, the costal



MICRONISSA.

vein free, the subcostals from the end of cell, radial absent, the medians from lower angle of cell, the first median from before the angle.

20. *Micronissa margaritata*.

Urapteryx margaritata, Moore, P. Z. S., 1867, p. 612 ;
Waterhouse, Aid., xxx., pl. 184, f. 1 (1889).

Twenty-three specimens.

ENNOMIDÆ.

HYPERYTHRA, Guén., Phal, i., 99 (1857).

21. *Hyperythra phoenix*, n. sp.

♂. Of a uniform pale greenish yellow colour, finely and regularly striated with reddish brown, varying somewhat in colour from greyish greenish yellow to reddish grey, but always of a uniform coloration. Wings crossed by two pale indistinct reddish grey straight bands; first before, but close to the middle; second discal; second band limited on its inner side by a brown line, more distinct on hind wings; a largish brown subapical spot on hind wings outside the discal band, with a small spot above it, and sometimes one or two more spots on the band hindwards; marginal border of hind wing distinctly sinuous. Under side luteous, striated with grey; a broad reddish brown line or thin band across both wings from costa at one-fifth from apex to abdominal margin one-fifth from anal angle; traces of a medial thin band, a brown point at end of each cell (in some specimens this is also to be distinguished above), and a large white subcostal marginal patch on fore wings. Expanse of wings, 2 in.

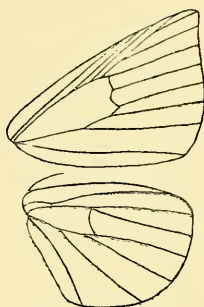
Numerous specimens; all males.

This species has come in hundreds; at first I got one, and thought it a curious and very large form of *H. lutea*, Cram., but I have now many examples. They are very uniform in character and size, have the margin of hind wings much more sinuous, the colour is never nebulous above, as in *H. lutea*, and it is undoubtedly a good and distinct form. I have also received many examples of *H. lutea* from the same locality.

ANTHYPERYTHRA, Warren MS., gen. nov.

Type. *A. hermearia*, mihi.

Allied to *Hyperythra*, from which it differs in the second subcostal of the fore wing being emitted before the end of the cell instead of from the fourth, and in the cell of the hind wing being of normal length; whilst in *Hyperythra* it is much shortened, especially in the male, in which sex it is open, and contains a glandular patch on the upper side bearing a tuft of long hairs.



ANTHYPERYTHRA.

22. *Anthyperythra hermearia*, n. sp. (Pl. XIX., fig. 9).

♂. Luteous yellow, sparsely irrorated in places with purplish red; antennæ pale purplish red; palpi, head, fore part of thorax, and central margin of fore wings dark purplish red. Both wings crossed by a reddish line or thin band; in the fore wings the band is beyond the middle, in the hind wings it is in the middle; a large round purplish blotch on fore wings near the hinder margin, touching the line on the outer side; another similar but smaller blotch, a patch on the outer margin just below the apex; the entire space between the line and outer margin on fore wings is suffused with pinkish, but on fore wings there is a similar suffusion on the outer side of the line only. Under side as above, but brighter; both wings sparsely covered with small but rather prominent brown spots, and with a darker pinkish suffusion outside the line in both wings; femora yellow, with brown spots; tibiæ and tarsi pinkish. Expanse of wings, $1\frac{7}{10}$ —2 in.

Five specimens.

ODONTOPERA, Steph., Ill. Brit. Haust., iii. p. 162
(1828—35).

23. *Odontopera nemea*, n. sp. (Pl. XIX., fig. 5).

♂. Of a uniform wood-brown colour. Fore wings with a subcostal dark brown stripe, straight and parallel with the costa from base to outer margin; two blackish marks on the costa where the two transverse dark brown lines commence; these lines do not, however, touch the costa, but run from the subcostal stripe, the

first before the middle, curving outwardly, and are only indicated on the upper portions of the hind wings; the second discal is quite straight down to the hinder angle of fore wings, and from apex of hind wings straight down to the excavation on the outer margin at the end of the median vein. Both wings are covered with brown irrorations; a black dot at end of each cell, a submarginal pale sinuous line, which on the upper part of the fore wings is included in a brown stripe, and in the hind wings runs through the discal transverse straight brown line. Hind wings with a discal sinuous pale outwardly curved line, with black points on the veins; cilia of both wings pale at its base, and dark brown outwardly in places. Under side brighter and darker brown, yellowish at the base and hinder portions of fore wings, and basal half of hind wings; bands showing through the wings, a pale patch in centre of outer margins of all the wings, and the whole surface of the wings covered with brown irrorations. Expanse of wings, $1\frac{6}{10}$ in.

One specimen.

Wings shaped as in *O. chalybeata*, Moore (a green insect), but the marginal excavations deeper.

SELENIA, *Hüb.*, Verz. Schm., 292 (1816).

24. *Selenia codra*, n sp. (Pl. XIX., fig. 8).

♂. Pale greyish fawn-colour, with a slight yellowish tinge, evenly striated with grey; plumes of the antennæ blackish. Fore wings striated with black on the costa and on the disco-cellular portions; a double blackish brown straight line from the hinder margin near the base to the centre of the wing, where it is acutely angled and retracted in a single straight line to the costa; a double curved similar line from the hinder margin one-fourth from the angle to the apex of the wing; two or three whitish dots outside the line below the apex, a large brown spot outside the line near the hinder margin, and a small brown dot below it on the margin; a black dot at the end of the cell. Hind wings with a black dot at the end of the cell, and a straight submarginal whitish line from below the apex to the anal angle, margin dentated, rather acutely so below the middle, the inner duplex line of fore wings continued subbasally across the hind wing. Under side paler, markings showing through, and a greyish nebulous pale band across the disc of both wings, terminating in a blackish mark on the abdominal margin. Expanse of wings, $1\frac{7}{10}$ in.

One specimen.

Allied to *S. decorata*, Moore, but the clear surface of

the wings and the straightness and position of the inner band at once distinguishes it from that species.

25. *Selenia murina*, n. sp. (Pl. XIX., fig. 13).

♂. Of a uniform greyish mouse-colour. Fore wings with three transverse sinuous fine brown lines; first subbasal, second just before the middle, both curving almost acutely inwards on to the costa, where there are brown patches, the second one very much the larger; third line bent a little inwards on the hinder margin, then running nearly upright rather close to the second to the costa near the apex, where there is another blackish brown mark. Hind wing with a central outwardly curved indistinct fine brown line, corresponding to the third line on the fore wings, ending in a brown mark on the abdominal margin, with another mark on the margin above it; cilia of both wings with pale tips. Fore wings with the apex bent round, and with a rather deep excavation on the outer margin just below it. Under side paler; apex of fore wings with a reddish tinge, the outer line and costal mark visible; hind wing with two brownish indistinct outwardly curved bands before and beyond the middle, and rather close to each other. Expanse of wings, $1\frac{7}{10}$ in.

One specimen.

Allied to nothing I know of.

OXYDIDÆ.

MARCALA, *Walker*, xxvi., 1764 (1862).

26. *Marcala varians*, n. sp.

♂. Wings shorter than usual, and comparatively broader; general coloration reddish grey, very variable, sometimes yellowish, in one specimen nearly bright red, and in another bright green. Fore wings with an interior nearly erect transverse brown thin band about one-fifth from base, which curves in to a spot or slight thickening on the costa; a similarly coloured discal band from the apex to the hinder margin, one-fourth from hinder angle; this band in some specimens has a small spot near the apex, and is accompanied by a large brown spot on its outer side near the hinder angle, but this is not present in all specimens; a mark like the commencement of another band on the costa one-third from apex, and a small brown dot at end of cell; the entire wing minutely irrorated with grey atoms, and in places sparsely striated with blackish brown. Hind wings striated with blackish brown; a

brown dot at end of cell, a brown outwardly curved thin discal band, the colour of the wing inside the band whitish, outside of it generally of the same colour as the fore wings, but paler. Under side in all specimens, whatever the coloration above may be the general coloration of both wings, is of a uniform pale yellowish, thickly striated in parts with brown, and with the cell-dots and transverse bands as above. Expanse of wings, $1\frac{5}{10}$ in.

Twenty specimens; all males.

In its markings it differs from all the other species of this genus in the disposition of the bands, which usually, in this genus, run parallel with each other.

ÆNOCHROMIDÆ.

- SARCINODES, *Guén.*, Phal., i., p. 188 (1857).

27. *Sarcinodes susana*, n. sp.

♂. Reddish ochreous, abdomen marked with purplish brown; wings spotted with purplish brown, and with patches of the same colour; a transverse band of these patches before the middle; a straight discal line, not so dark as the patches, from apex of fore wings to abdominal margin of hind wings, one-third from anal angle, the line edged with whitish on both sides, and between this line and the margin there is another irregular band of patches; brown marginal points, and cilia reddish. Under side as above, but paler and more yellow. Expanse of wings, $2\frac{4}{10}$ in.

One specimen.

Nearest to *S. debitaria*, Walker, but without the cell-spot and subbasal band on fore wings; the discal line, though similarly placed, is of a different description, and differs altogether in the purple-brown patches with which the wings are covered. On the under side *S. debitaria* is greyish, thickly striated with brown, with a discal line of brown points across both wings.

BOARMIIDÆ.

CLEORA, *Curt.*, Brit. Ent., p. 88 (1825).

28. *Cleora nebulosa*, n. sp.

♂. Palpi brown, with pale pinkish tips; shafts of the antennæ pale pinkish grey, with brown bands and brown plumes; body and wings with the ground colour pale pinkish grey, clouded with brown; abdomen with pale pinkish grey apex. Fore wings with some blackish brown marks on the costa, which are the apparent

indications of two nebulous brown bands, one before the middle, and the other discal, which bifurcates on to the costa and apex, leaving a pale space between; a submarginal dentated pale line, a blackish marginal line interlaced with black lunular spots; pinkish cilia varied with brown patches, and the entire wing more or less striated with brown, giving the whole surface a nebulous appearance difficult to describe. Hind wings with the upper part clear of striations, the lower striated like the fore wings; a brown lunular mark at end of cell, a submarginal whitish sinuous line, banded on the inside with brown, like in the fore wings; cilia pale, interlined, marginal line blackish brown and sinuous. Under side ochreous, striated in parts with brown; a brown spot at end of each cell, and a broad discal brown band across both wings, touching the margin in most parts. Expanse of wings, $1\frac{4}{10}$ in.

Six specimens.

A very curiously marked *Cleora*.

OPHTHALMODES, Guén., Phal., i. 447 (1857).

29. *Ophthalmodes pulsaria*, n. sp.

♂. Antennæ brown, thorax and wings of a uniform dark green colour, abdomen grey. Both wings with pale lunular discoidal marks bordered with brown, and crossed by three outwardly dentated reddish brown bands, outwardly edged with whitish; brown marginal spots somewhat lunular in shape in the interspaces; cilia green, marked with whitish opposite the veins. Under side pale grey; a large blackish spot at the end of each cell, and both wings crossed by a broad submarginal blackish band, which on the fore wings runs on to the margin, except at the apex; body and legs grey. Expanse of wings, $2\frac{2}{10}$ — $2\frac{5}{10}$ in.

Three specimens.

Allied to *O. infusaria*, Walker, is smaller, of a different green colour, has reddish bands instead of grey, and of a different character.

30. *Ophthalmodes lectularia*, n. sp. (Pl. XIX., fig. 4).

♂. Antennæ brown, thorax and wings greyish, suffused with green, and irrorated with brown atoms; abdomen grey. Wings with brown spots at the end of each cell, centred with white, and crossed by three outwardly dentated transverse brown bands, outwardly edged with whitish, outer margin with brown spots in the interspaces; cilia in whitish and brown patches, the latter being

opposite the brown spots on the margin. Under side grey, densely irrorated with brown, and with broad submarginal suffused brownish bands, which on the fore wing run into the margin; body grey, legs grey; tarsi brown, with greyish white bands. Expanse of wings. $1\frac{6}{10}$ in.

One specimen.

Allied to *O. diurnaria*, Guén., very much smaller, the bands straighter on the fore wings, and of a different shade of green.

DINDICA, Moore, Descr. Ind. Lep. Atk., iii., p. 248 (1888).

31. *Dindica para*, n. sp.

♂. Antennæ brown; palpi, head, thorax, and fore wings greyish green, varying much in colour in different specimens to grey and greyish ochreous. Fore wings covered with fuscous irrorations; an outer blackish line from hinder margin, one-fifth from the angle, ascending in a sinuous form for one-third, then curving towards the outer margin, where it forms a dentation near the margin above the middle, and is retracted in a nearly straight line to the costa one-fourth from apex; a short dentated subapical white line from the costa to the apex of the tooth of the discal line, where there is an indistinct reddish spot on a pale ground; outer marginal line black and lunular; cilia ochreous grey, interlined, and with brown patches; there are also some internal brown streaks on the veins. Hind wing ochreous, dark and bright in some specimens, nearly white in others, always pale on the costal space; a nebulous marginal band of the same colour as the fore wings, patched with blackish on its inner side, being in reality a black submarginal incomplete band on the under side showing through the wing. Under side greyish white, suffused with ochreous on the inner portion of the hind wings; a large blackish spot at the end of cell of fore wings, some black marks on costa, similar subapical striations, limited by a diffuse discal band reaching neither costa nor hinder angle; black lunules on the margin, and some black marks on the white cilia. Hind wings with an incomplete submarginal band, which varies in size and distinctness in many examples; body and legs ochreous grey; legs with brown bands. Expanse of wings, $1\frac{6}{10}$ — $1\frac{7}{10}$ in.

Many specimens; all males.

Like a miniature *D. polyphænarina*, Guén., which has come from the same locality, in the same lot in rather large numbers; the marks on the fore wings are very

similar, but the colour of the wing is of a different character, and the marginal band of the hind wings above and below is quite different, and about half the width of that species.

PINGASA, Moore, Lep. Ceylon, iii., p. 419 (1887).

32. *Pingasa alba*, n. sp. (Pl. XIX., fig. 6).

♂. White; antennæ with the pectinations brown. Fore wings with fine brown marks on the costa, a faint grey transverse outwardly curved line at the basal third. Both wings with a discal grey line nearly corresponding to the shape of the outer margins, with small dentations outwards on the veins; there is a very slight ochreous grey tinge on the fore part of the thorax and base of wings; otherwise above and below the coloration is uniformly white; marginal line above grey, Under side without markings, with the exception of the discal line being slightly visible through the wings, and a slight brown suffusion on fore wings outside the line; legs with pale brown stripes. Expanse of wings, 2 in.

One specimen.

The discal line runs up to the costa in an even curve, somewhat as in *P. rufofasciata*, Moore, but is nearer to the outer margin; its white unmarked surface, however, distinguishes it from all the other Indian species of this genus.

ALANA, Walker, xxxv., p. 1568 (1866).

33. *Alana albopunctata*, n. sp.

♂. Of a uniform dark reddish brown; shafts of the antennæ pale, plumes blackish; tip of abdomen ochreous. Both wings much striated with brown, and with white striations, the latter dense on basal half, especially on fore wings. Fore wings with a large white patch at apex. Hind wings with a largish white spot inside the end of the cell; both wings with two rows of white discal points on a darker band of brown striations, these points in some specimens suffused into white striations; margin of both wings pale, and studded with clear white points on the veins; cilia palely interlined. Under side grey, suffused with reddish ochreous, brighter on hind wings, and with the outer portion of the wings irrorated with brown atoms; body and legs ochreous red. Expanse of wings, $1\frac{4}{10}$ in.

Many specimens (over two hundred); all males.

Allied to *A. vexillaria*, Guén., and *A. riobearia*, Walk.;

between the two in size, somewhat like the former in colour and pattern above, and like the latter on the under side; very constant in colour and pattern in all the numerous specimens received.

MACARIDÆ.

MACARIA, *Curt.*, *Brit. Ent.*, p. 132 (1826).

34. *Macaria temeraria*, n. sp.

♂. Pale grey, tinged with ochreous, and striated with darker grey and brown; abdomen with two rows of brown dots. Fore wings with four transverse lines; first subbasal, sinuous, greyish brown, and well curved outwardly; second medial, third discal; both similarly coloured, running outwardly from costa, then sharply bent inwards to the hinder margin; second in an irregular and distorted shape, the lower portion in some specimens not visible; third whitish from the angle downwards, and nearly straight; fourth whitish from hinder margin upwards to costa near apex, the striations from third line to costa dark brown, giving a suffused brown shading to this part of the wing. Hind wings with a fine brown dot at end of cell; an interior and a discal outwardly curved sinuous greyish brown line, and a straight white line from hinder angle to apex, with a brown inner edging, the margin outside this line suffused with brownish; cilia of both wings interlined, and in five shades: white, grey, ochreous, grey, and ochreous. Under side paler and brighter, with lower and outer portions of both wings whitish; both wings with interior and exterior outwardly curved sinuous lines, and with outer lines as above; a fine brown dot at end of cell in hind wings, brown marginal dots between the veins, and interlined cilia. Expanse of wings, $1\frac{1}{2}$ in.

Four specimens.

CARIGE, *Walker*, xxvi., p. 1631 (1862).

35. *Carige rachiaria*, n. sp.

♂. Chocolate-brown, irrorated with black; shaft of antennæ speckled with black, pectinations variegated, being black with pale chocolate coloured spots; abdomen with pale bands; wings with pale veins. Wings with a black dot at end of each cell; a discal macular band of black square spots, with a continuous pale line running through them; these patches are divided by the pale veins; three patches on the fore wing, subcostal, above the middle and on the hinder margin, and two at lower end of hind wing; the

pale line is bordered with black, and is obsolete on upper portion of hind wing; also a submarginal row of small black spear-shaped marks, outwardly pale-edged, these being also obsolete on upper portion of hind wings; a pale ante-ciliary line and brown cilia, with pale tips and pale patches opposite the extremities of the veins. Under side pale chocolate-grey, densely irrorated in parts with brown; a brown point at end of each cell, indications of central and submarginal bands, cilia as above. Expanse of wings, $1\frac{2}{10}$ in.

Twelve specimens.

LARENTIIDÆ.

CIDARIA, *Treit.*, *Schm.*, vi., 2, 242 (1828).

36. *Cidaria fecunda*, n. sp.

♂. Greenish brown, top of head pinkish grey, abdomen suffused with this colour on its lower portions. Fore wings with the ground colour pinkish grey, irrorated and suffused in parts with greenish grey, making the coloration variable in many specimens; the wing crossed by four brown bands, subbasal, ante-medial, post-medial, and submarginal; these bands are margined by blackish sinuous lines, which are dentated in places; all curve outwardly, the third band deeply above its centre; marginal line black; cilia pinkish grey, with a pale brown band, and with brown patches opposite the veins. Hind wings pale grey, more or less suffused with pinkish, with a submarginal grey band composed of two inwardly dentated lines, and with some faint sinuous lines in the interior portions of the wing, which in some specimens are not visible, except on the abdominal margin; marginal line black, cilia as in fore wings. Under side of a uniform pale pinkish grey, with some distinct sinuous brown lines forming broad discal and marginal bands; legs with brown above; tarsi with pinkish grey bands on the brown portions. Expanse of wings, $1\frac{3}{10}$ in.

In great numbers; all males.

A very distinct species, difficult to describe, and must be very plentiful in the Khasia Hills, many hundreds having come in one batch.

37. *Cidaria scortea*, n. sp.

♂. Greenish grey; palpi covered with black hairs; body and fore wings irrorated with brown, densely packed on the fore wings into three or four broad transverse bands, the central the most

distinct, being limited outwardly by an inwardly dentated pale pinkish grey sinuous line, with black tips to the dentations; this is the commencement of a discal band of pale pinkish grey, the rest of the margin being brown; the pinkish band has a brown sinuous line running through it, and the marginal brown portion has two pale sinuous and dentated lines, these lines being margined with dark brown, and with black tips to the dentations; marginal line brown and lunular; cilia pale pinkish grey, with brown patches opposite the veins; costa with brown markings. Hind wings greyish fawn-colour, marginal line and cilia as in fore wings. Under side pale dirty grey, an indistinct greyish sinuous discal line, and marginal darker band. Expanse of wings, $1\frac{2}{10}$ — $1\frac{1}{2}$ in.

Many specimens; all males.

38. *Cidaria furva*, n. sp.

♂. Dark olive-brown. Fore wings crossed by many pale transverse lines from the base to the outer third of the wing; these lines are crossed by the pale pinkish veins; across the centre of the wing is a darker brown band of nine squarish large spots, the apical portion of the outer third is pale grey, the space below having dark spaces, and through it all runs a discal duplex brown line, dentated inwardly on its upper portions; there is also a submarginal blackish line, terminating by running into the outer margin below the apex. Hind wing greyish brown, with a pale pinkish grey costal space, and a pale sinuous short line or band running inwards from the anal angle, very indistinct in some specimens. Both wings with marginal line black; cilia pale pinkish grey, with a brown internal band, and brown patches opposite the veins. Under side pale ochreous grey, irrorated with brownish grey, with some indications of the markings on the upper sides. Expanse of wings, $1\frac{6}{10}$ in.

In great numbers; all males.

Allied to *C. obscurata*, Moore, and looks very like it on the under side when the wings are closed; but the markings above are different, and the large apical pale patch at once distinguishes it.

EXPLANATION OF PLATE XIX.

- FIG. 1. *Deilemera carissima*, ♂, n. sp., p. 477.
2. *Orgyia interjecta*, ♂, n. sp., p. 478,
3. *Kalmia ochracea*, ♂, n. sp., p. 481.
4. *Ophthalmodes lectularia*, ♂, n. sp., p. 489.
5. *Odontopera nemea*, ♂, n. sp., p. 485.
6. *Pingasa alba*, ♂, n. sp., p. 490.
7. *Hydrusa actea*, ♂, n. sp., p. 474.
8. *Selenia codra*, ♂, n. sp., p. 486.
9. *Anthyperythra hermearia*, ♂, n. sp., p. 485.
10. *Hydrusa baiaea*, ♂, n. sp., p. 473.
11. *Gortyna intermixta*, ♂, n. sp., p. 480.
12. *Barsine delicea*, ♂, n. sp., p. 477.
13. *Selenia murina*, ♂, n. sp., p. 486.
14. *Hypena daria*, ♂, n. sp., p. 482.
15. *Hydrusa era*, ♂, n. sp., p. 473.
16. *Pydna notata*, ♂, n. sp., p. 479.